

**Sultan Qaboos University
College of Science
Department of Computer Science**

COMP3501 Computer Organization & Assembly Language

Lab 1 Exercise

Write an assembly language program that starts by asking the user to enter a positive integer number N and reads it from the keyboard. The program then asks the user to enter N integer numbers, reads these N numbers, and calculates and displays their sum on the screen.

Your program should display clear prompt messages and clear output messages.

Below is a description of some Irvine32 library procedures which you may need. More information is available in section 5.3.2 (page 165) of Textbook 2.

Needed Irvine32 Library Procedures:

Crlf: advances the cursor to the beginning of the next line in the console window.

ReadDec: reads a 32-bit unsigned decimal integer from the keyboard and returns it in EAX.

ReadInt: reads a 32-bit signed decimal integer from the keyboard and returns it in EAX.

WriteInt: Writes a 32-bit signed integer to the console window. Pass the integer in EAX.

WriteString: writes a null-terminated string to the console window. Pass the string's offset in EDX.

Sample Runs:

```
Enter a positive integer: 4
Enter an integer: 0
Enter an integer: 1
Enter an integer: -2
Enter an integer: 5
The sum is: +4
```

```
Enter a positive integer: 5
Enter an integer: 1
Enter an integer: 2
Enter an integer: 3
Enter an integer: 4
Enter an integer: 5
The sum is: +15
```